



From fishing port to transport hub?

Local voices on the identity of places and flows

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ABSTRACT

This paper investigates the relationship between port and city and how changes in the port-related activities affect livability of the coastal community. Building from the port-city relationships model by Ducruet (2007), categorising port-cities into 9 different typologies, we argue that a port-city is not stable and can in fact shift in typology based on changes in either port or city related activities. These activities are closely linked, and changes in one domain will most likely affect others. For example, as maritime industries change, the local communities have to adapt. We employ the case of Hirtshals, Denmark, which has changed from a fishing port to a transit hub. The paper seeks to understand port-city transitions, and questions whether a balance between city and port is indeed the most desirable, or at least is preferred to situations where the port outweighs the city? Through the combination of two independent doctoral research projects both investigating the dynamics of Hirtshals, Denmark in the period of 2013-2015, the paper provides rich empirical insights, primarily from interviews but also ethnographic and other observation methods, into the locals' way of coping with the transitions and their experience of local identity, culture and heritage in relation to the place in which they live and work and the flows passing and connecting the port-city. The case of Hirtshals gives insights on the intended balance between port and town and the implications for emphasizing port development independent of the local community.



From fishing port to transit hub? Local voices on the identity of places and flows

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KEYWORDS

Port-city relationships; Transitions; Coastal communities; Local heritage

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Introduction

When looking into port-city transitions, the relationship between port and city is pivotal. *Port-city relationships* is an established and growing research field within geography and related fields of study (see e.g. Bird 1963; Ducruet 2007; Hoyle 1988, 1989 2000; Hein 2016). Although discussions of ports and port development are often set within an urban studies context, cases of rural or peripheral (absolute and/or constructed) places with key land-sea connections proliferate, making ports a relevant topic also outside major metropolitan areas. Furthermore, shifts in coastal economies and demography have been connected to the changing role of fisheries in many rural, coastal places (Gerrard 2017, 2013; Valestrand et al. 2013; Hamilton and Butler 2001; Hamilton, Colocousis, and Johansen 2004; Hamilton and Otterstad 1998). Unpacking the connections between community livability and the maritime industries that operate on -and offshore will become increasingly pertinent under increased calls for Blue Growth and participation in the Blue Economy.

The paper seeks to understand port-city transitions, and questions whether a balance between city and port is indeed the most desirable, or at least is preferred to situations where the port outweighs the city? For this, we build a conceptual framework expanding on the model of port-city relationships of Ducruet (2007). The model delineates nine different types of port cities. However, the model does not give insights on *how* a port-city relationship can shift from one space in the matrix towards another. In order to understand port-city transitions, our theoretical framework includes literature on sticky/slippery space (Markusen 1996) and space of flows/space of place (Castells 1996). First, we will elaborate on why either port or city is in different cases 'bigger' than the other, in other words what 'attracts' in the different axes. Second, we will expand on the model, arguing that a port-city-relationship is not stable and can in fact shift from one field in the matrix to another over time.

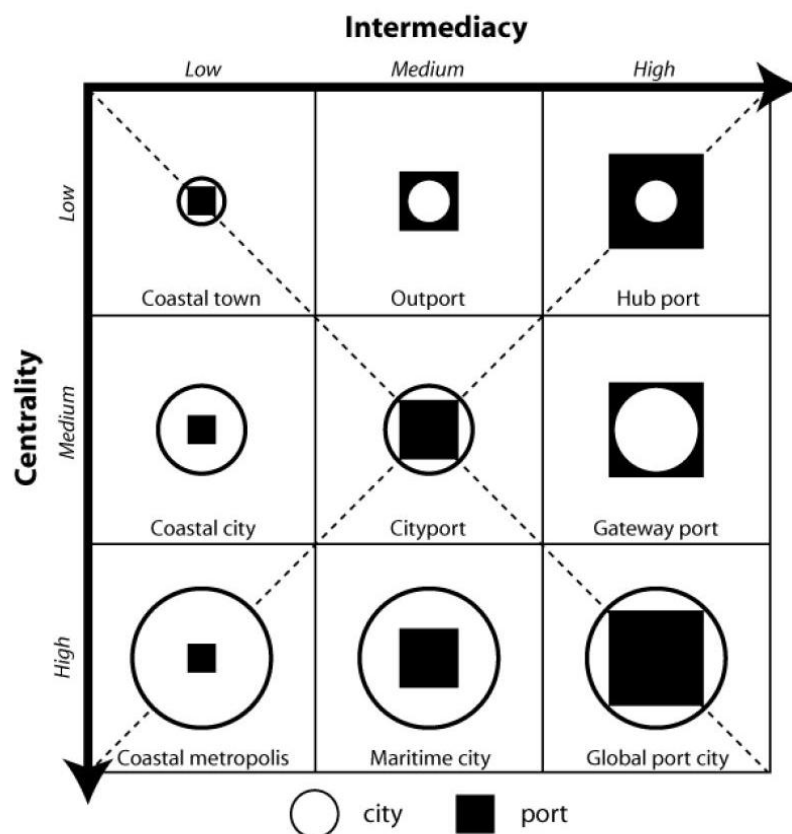
We employ Hirtshals, Denmark as an illustrative case to support this argument and explore port-city transitions and their implications to the local community. We will provide a proper introduction to the case of Hirtshals in the beginning of the analysis part 4 in this paper, but for now, as argued elsewhere, "Hirtshals can neither be understood in isolation as a transit town nor isolated as a living town, but rather [...] quite so consists, works and exists by virtue of both" (Lange 2016, p. 7). Building on two different and independent studies of Hirtshals, this paper combines disciplines and perspectives of urban planning and mobilities studies with that of human geography and ethnography. Through the case, we analyze the mechanisms at play when a port-city transition unfolds and provide insight into how change is experienced from within. Working from a case of transition from fishing to transport-centric businesses, we unpack the lasting influences of the fishing sector on local heritage, culture, identity and attractiveness for settlement and reflections of the community's adaptation over the years.

Theoretical framework: understanding port-city transitions

This work builds on a wider acknowledgement that places are increasingly influenced by mobilities, where the movement of goods and people merge with the historical activities and settlement patterns resulting in disruptions and new configurations. Synthesizing the contributions of Ducruet (2004, 2007), Markusen (1996), and Castells (1996) provides both a typology for port-city relationships and an understanding that endogenous and exogenous factors may shift the balance of those relationships. Ducruet's model (2007, 2004) conceptualizes a

typology of nine different port-city interrelationships, constructed on the degree of centrality and intermediacy (Figure 1). Its vertical axis, *centrality* captures the endogenous growth or commercial activities that make the location particularly interesting to commerce and trade, or as Ducruet writes, “a local/regional trade generation power” (Ducruet 2007, p. 160). The horizontal axis of intermediacy represents exogenous factors that make the port *attractive* or, “external player’s election of a place for serving their networks” (Ducruet 2007, p. 160). As theorized and empirically supported in his analysis, Ducruet explicates that ports have internal selling points—markets, resources, labor pools, etc.—that make them attractive as well as exogenous factors that influence their development.

Figure 1: A matrix of port-city relationships



Source: adapted from Ducruet, 2004b

Figure 1. César Ducruet’s matrix of port-city relationships. (Ducruet 2007).

Dependent on the degree of centrality as well as intermediacy, the city and the port have different priority towards each other in a relationship not necessarily equally weighted, one seeming to be of greater size and importance than the other. Along the downward diagonal (from top left to bottom right), port and city are equal in size and presume a degree of balance. In the lower-right and the upper-left corners, the size of the port versus the city is in the reciprocal. We take Ducruet’s typology, but expand it to explore how port-cities may move within this grid over time as the balance shifts. Other seminal models on port-city development such as Bird’s Anyport model (1963) and Hoyle’s port-city interface model (1988) have already looked into changes in port-city relationships over time (see also these models in relation to the case of Hirtshals in Lange 2020). However, with the specific dynamics of Hirtshals, these two models do not lend a great deal of explanatory power in the way Ducruet in combination with Markusen (1996) and Castells (1996) does.

Sticky places of flows

To unfold the attractiveness of either city or port aspects of a port-city relationship, we will draw upon two sets of theoretical insights, namely “sticky vs. slippery places” (Markusen 1996) and “space of flows vs. space of places” (Castells 1996). These concepts are fruitful to understand the development of regional networks and nodes, and to understand the transition from one port-city relationship to another configuration or balance.

Markusen (1996, p. 293) identifies different typologies of industrial districts, mainly in advanced capital countries, which are “able to sustain their attractiveness to both capital and labor”. She refers to these industrial districts as “sticky places”, despite the fact that “Production space in these countries has become increasingly ‘slippery’, as the ease to capital of moving plants grows and as new competing lines are set up in lower-cost regions elsewhere” (Markusen 1996, p. 293). Markusen (1996, p. 293) defines “stickiness” as “both the ability to attract as well as keep, like fly tape”. In other words, Markusen points out how places (industrial districts in particular) are sticky or slippery towards employees and industries of different kinds. The research by Markusen is made on a regional level and is essentially about industrial districts and their economy, whereas more local community perspectives are absent from the study. Applying the concept to a more local geography, questions could be raised on whether a specific place acts as sticky or *slippery* towards residents settling, towards tourism or towards certain industrial branches. With a departure in geography, planning and the sociology of technology, Graham (2002) has used the terms *sticky* and *slippery* to discuss the structuring of future cities and what he calls *urban network architecture*. He advocates that global activities always have local settings, but that the global, often “sticky” activities can have severe implications locally. To give an example, this means that establishing a “sticky” business does not necessarily provide jobs or other growth for the surrounding local community, but may in fact carry discomfort such as noise, and pollution. Thus, global activities might only provide global assets.

One characteristic of port cities is their strong relationships with other cities and places overseas and in the hinterland as part of an urban network. According to Castells (1996, 2006) contemporary society is today to a greater extent structured around networks rather than individual actors. “The network society” is characterized by a constant flow of information (material and intangible), driven by technological advances (Castells 1996). The tangible and intangible component of these global information networks constitutes the “space of flows” as “the material arrangements allow for simultaneity of social practices without territorial contiguity” (Castells 1999, p. 295). Castells (1999) notes that the ‘space of flows’ not only constitutes electronic space or information systems, but also “hubs and nodes”. Relevant especially to this case study, hubs are sites of communication and exchange (e.g. airports, harbors, train and bus stations), or places that organize a multiplicity of exchanges. Castells describes the logic of hubs and nodes as one that “depends on their place in the network, and that [hubs and nodes] are sites to process signals that do not originate from any specific place but from endless recurrent interactions in the network” (Castells 1999, p. 295-296). In this connection, the constituent component of “habitats” are important “for the social actors that operate the networks, be it residential spaces adjacent to the nodes, protected and secluded spaces of consumption, or global corridors of social segregation separating these corridors from the surrounding places around the globe” (Castells 1999, p. 295-296). Hubs, nodes, and habitats also help see the construction of urban and rural places and the blend therein.

The ‘space of flows’ contrasts to the ‘space of places’, which are the physical spaces we find ourselves in, in both time and space. Castells defines a place “as the locale whose form, function, and meaning are self-contained within the boundaries of territorial contiguity. People tend to construct their life in reference to places, such as their home, neighborhood city, region, or country” (Castells 1999, p. 296).

The network society incites more flows and networks (physical, digital and virtual) while physical context becomes less significant. According to Castells, the “dominant activities” have remained around the ‘*space of flows*’, while “experiences” and “social interactions” are still being organized around the ‘spaces of places’, but the ‘spaces of places’ are becoming increasingly powerless along with the versatility of the ‘*space of flows*’ (Castells 1999, p. 296). The network society and the ‘*space of flows*’ have emerged concurrently with globalization and the (post) modern society:

The only chance of resistance for localities is to refuse landing rights for overwhelming flows—only to see that they land in the locale nearby, therefore inducing the bypassing and marginalization of rebellious communication (Castells 1999, p. 296-297).

In many cases nodes and hubs have become increasingly specialized and adept at gaining and pooling resources, echoed in Markusen’s (1996) analysis of industrial districts’ stickiness. Meanwhile, habitats seem to be spreading, in ways stretching over more and more territory but also diluting in potency in terms of individuals and communities (or networks) with collective connections to certain hubs and nodes.

Returning to the Ducruet model, thinking with Castells and Markusen helps us to understand why not all port-cities are in a ‘balanced’ relationship like coastal towns, cityports and global port cities. Activities within ‘spaces of flows’ can support the stickiness of port activities and consequently dominate and complicate the centrality of the city, leading to outports, gateway ports or ultimately hub ports. On the other hand, as competition within the network sharpens, some industrial ports districts might lose important trade routes or other activities and thereby become slippery, while non-port business or other activities central to the city might thrive and strengthen the ‘space of place’, resulting in port cities like coastal cities, coastal metropolises and maritime cities. Ducruet will allow us to think about these shifting relationships and their consequences.

Methodology

This paper combines the studies of two doctoral research projects investigating the dynamics of Hirtshals, Denmark in the period of 2013-2015. One project focused on the dynamics of Hirtshals as a fisheries dependent community undergoing transition (Ounanian 2016) and the other adopted a mobilities and urban design approach to investigate the lived and transited experiences of this port-city (Lange 2016). Recognizing the opportunity to write across the studies, this paper combines the data and analysis of these two Ph.D. research projects and builds on shared findings and themes that emerged. In both projects, data collection followed a mixed methods approach, including interviews, ethnographic fieldwork and participant observations, surveys, statistics, architectural mappings and site analysis as well as various document analysis as modes of data collection. The combination of the two individual studies presents a unique example of triangulation. Recognizing the overlapping projects and their abilities to extend and support the findings of the other, the joint analysis of this paper was born.

Although these two studies collected data independently, they share a geographical place, time period of research, and interviews with both residents and key informants living and/or working in Hirtshals. Moreover, both Ph.D. projects focused on questions of local development and change over time with specific interest in the connections between the wider community and the activities of the port—be it fishing or maritime transportation. Although these studies supplement one another, they did have different thematic starting points and disciplinary orientations. Combining analyses post hoc is atypical in scholarship; however, we argue that too often researchers work in isolation and miss opportunities to deepen findings by this sort of triangulation across research projects. Therefore, we outline the limitations of this study as such, but still find value in its existence.

In order to investigate how port-city transitions are experienced from within we have found in particular our collective interview material relevant. In total, we have conducted 13 semi-structured interviews (see Table 1). All names are pseudonyms for confidentiality. This is also the case when we mention local companies. Some interviewees have been asked as ‘experts’, focusing on their professional knowledge on certain topics; others have been asked as local citizens, focusing on their personal life worlds in and around Hirtshals. Many of the interviews have addressed both sides as these interviewees are both personally and professionally engaged in Hirtshals. Figure 2 shows the most significant interview question topics and how several of them bridge the two independent research projects (marked in yellow). Some interviews were conducted in English, but most interviews were done in Danish and are thus translated by the authors for this paper.

Supplementing the interview material we also draw on other empirical data from the two doctoral research projects in order to give sufficient historical and physical-material context for the case and insights into the changes in the port-city relationship.

Table 1. Summarizing interviews.

Researcher	Semi structured interviews, number	Persons Total	Pseudonyms	Occupation and relation to Hirtshals
Kristen Ounanian	9 (All semi structured interviews, including 2 group interviews)	11	Lars	Harbormaster/Director of port.
			Hans	Fishers organization representative.
			Janne	Hirtshals Tourism Board, grew up in Hirtshals.
			Gitte	SeaStraight communications manager, lived in Skagen.
			Eskild, Kristoffer	Bankers, financing fishing boats; lived in the area.
			Mette	Hjørring Municipality development office
			Arne	Mayor of Hjørring Municipality (*not anonymized with permission).
			Allan, Marie	Various local jobs and retirement home worker; lived in Hirtshals for 25+ years, raised 2 children in town.
			Karl	Director of regional maritime business organization, raised in Hirtshals.
Ida Sofie Gøtzsche Lange	4 (3 ‘double interviews’, first parts as semi structured elite interviews and last parts as semi structured lifeworld interviews) + (1 group interview conducted as a full semi-structured lifeworld interviews)	7	Otto	City counselor and chair of tourist association; local resident, born and raised in Hirtshals.
			Line	Marketing manager at The Port of Hirtshals; resides in Hjørring.
			Carsten	Professional stonemason focusing on urban spaces; local resident, newcomer.
			Lotte	Customer adviser in a bank in Aalborg. Local resident, born and bred in Hirtshals. Recently returned from residence elsewhere in Denmark.
			Troels	Financial Manager for a maritime educational institution in Frederikshavn. Local resident, born and bred in Hirtshals. Recently returned from residence elsewhere in Denmark.
			Britta	Accountant in Aalborg. Local resident, born and bred in Hirtshals.
			Esben	Chief engineer in Hjørring. Local resident, born and bred in Hirtshals.

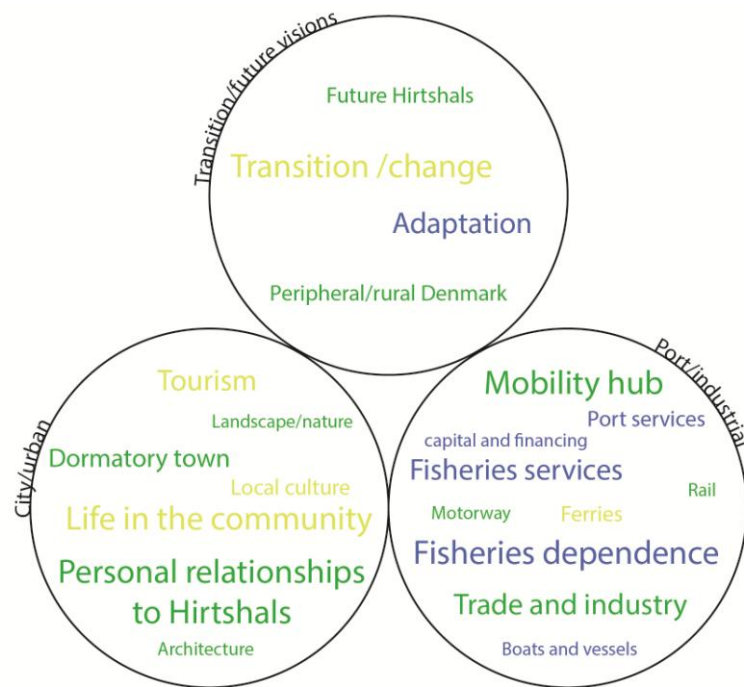


Figure 2. Categorization of interview question topics by theme (circle), importance (text size) and interviewer (I.S.G. Lange in green, K. Ounanian in blue and transversal in yellow).

Evidencing the transition from coastal town to hub port

In this section, we first provide a short introduction to the case for contextual clarity; then we describe how fisheries has been a historical cornerstone of Hirtshals and still is recognized as contemporary heritage by the locals. Following this, we elaborate on the comprehensive transition from fish to transit in the core of port activities and present implications for town residents. From the analysis we will show, according to the categories by Ducruet (2007) how Hirtshals over time has changed from being a coastal town, over a cityport, then an outpost to now being best described as a hub port. Looking into the transitions we will focus on the implications to the local community.

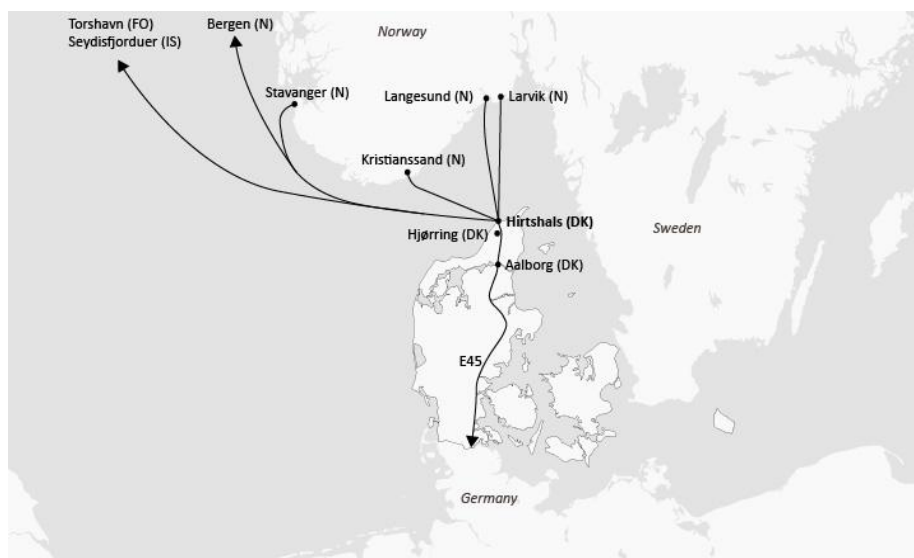


Figure 3. Hirtshals in an infrastructurally connected global geography. (map by I.S.G. Lange).

Case introduction: Hirtshals, Denmark

Hirtshals lies within the municipality of Hjørring, on the western edge of Northern Jutland (see Figure 3). Hirtshals is a “new” town in the Danish context, established as planned harbor and community via an architectural competition in 1919. The port and town developed through fishing, but the port has changed into a transportation hub with cargo ships and ferries as main activities. Today, Hirtshals is a small port-city with train lines connecting it to the city of Hjørring and places further along the Danish rail network. Hirtshals is about 67 km from Aalborg (the regional capital) on highway E39. Three ferry lines service Hirtshals with routes to five destinations in Norway, the Faeroe Islands, and Iceland. The ferries sail daily, year-round with approximately 2.5 million passengers annually. The Port of Hirtshals, its port authority, refers to itself as a “unique turntable” moving goods and people from areas of Scandinavia to other parts of Europe. In 2011 one of eight national transport centers was established in Hirtshals and in 2015 a 24,000 m² freight terminal was built, both establishing a land-sea transportation hub. Over the years there have been several port expansions, most recently in 2015-2017 with 190,000 m² landside. The harbor represents the largest center of employment within the whole municipality. Despite the growing harbor activities, socioeconomic figures reveal a town under pressure with high unemployment rates and residents on public assistance above the municipal average¹ and with the lowest educational level per capita in the whole municipality². In 2020, 5,733 people lived in Hirtshals³.

Fisheries as historical cornerstone and contemporary heritage

Fishing has been a part of Hirtshals even prior to its official establishment in 1919. Geography and proximity to fishing grounds led to the planning and development of the port and supporting town, in Ducruet terms a *coastal town*. In the 1970s Hirtshals was the largest commercial fishing port in Denmark with a growing population, best described as a cityport in Ducruet terms. However, limited resources, lower catch allowances, and environmental requirements challenged fishing, and during the 1980s the port’s five fishmeal factories were demolished. Furthermore, the introduction of transferable fishing quotas in the pelagic and demersal sectors in the period of 2005-2007 has reduced local participation in fisheries. The prominence of fishing has gone down over the years and is felt and understood by many of those interviewed. However, the service port status of Hirtshals remains important as a means of revenue from fisheries and helping maintain the onshore support businesses, the Hirtshals Fish Auction being one of the major draws for landings. Additionally, the transportation turntable characteristic of the port encourages pelagic vessels to land here and ship to processors in Northern Jutland, as well as frozen fish from Norway and Greenland shipped via the ferries.

Within the community, fisheries still hold cultural significance with the two most tangible events being the *Fastelavn*⁴ celebration and the annual Hirtshals’ Fish Festival. To celebrate *Fastelavn*, Hirtshals has a distinctive tradition: anyone interested may don a safety suit, jump into the harbor, and take turns striking the barrel suspended over the harbor, filled with single-sized bottles of alcohol (pictured in Figure 4). Spectators gather along the quay to watch those bobbing in the cold

¹ Source: Memorandum devised by the municipal administration for labour market (Arbejdsmarkedsforvaltningen i Hjørring Kommune): <https://hjoerring.dk/media/35782/pkt-3-bilag-2-faktaoplysninger-om-befolkningssammensaetning-i-hirtshals-maj-2019.pdf>

² Source: Statistics Denmark – © www.statistikbanken.dk/HFUDD10 and www.statistikbanken.dk/KMSTA007

³ Source: Statistics Denmark – © www.statistikbanken.dk/BY1

⁴ In contemporary Denmark, at *Fastelavn*, the last day before the start of Lent, children celebrate by hitting a sort of piñata suspended overhead filled with candy in a twist on the tradition of striking a wooden barrel with a black cat inside to rid evil spirits.

water and later to enjoy fish cakes and pastries. The Fish Festival runs every summer, including a competition among prominent chefs in North Jutland, cooking workshops for families, harbor trips, guided tours of the fish auction, educational materials about fishing, and competition for the best local aquavit. The Fish Festival has evolved into a regional attraction, whereas *Fastelavn* remains a very local community event.



Figure 4. Photographs of Fastelavn activities at Hirtshals harbor in 2014: Participants in the water with Fastelavn barrel suspended overhead (left) and spectators lined up along quay to watch those in the water (right). (Photos by K. Ounanian).

In addition to these public events, the harbor represents a key fixture in the lives of local people. Multiple interview participants referred to walking or driving by the harbor to see what is happening. Turning to her husband, Britta remarked, “Well, you love doing harbor rounds, and you can easily take three of them a day, to see what is going on down there [...]. Not because, well, you have never worked in the fish industry; but you know, you just have to see what’s going on at the harbor” (Britta, local resident and accountant in Aalborg).

The collective interview material reveals how the port is experienced as the most important element of the local identity (Figure 5). Not only is the harbor important for Hirtshals as a place for business and “money-making”, the harbor is also the dominant framework for leisure, its attraction coming from its current activities and elicitation of childhood memories. Many local citizens have parents or other relatives who work or have worked at the harbor, and for them, the harbor is encoded with many sensory impressions and positive experiences. The harbor activities have left impressions on the locals—even on those who have not had the immediate connection of family members with port-related jobs.

Visual markers of fisheries cultural heritage are omnipresent as anchors, ornamentations on buildings, and decorations with fishing boats stand as physical testimony both in front of private houses and in public squares, parks, and roundabouts (Figure 6). The architecture of the former town hall contains clear references to a ship, and the town has several memorials to commemorate the loss of fishermen and rescue workers of various maritime accidents. Furthermore, many grave markings in the cemetery include maritime insignia (Figure 7). All combined, the two annual fishing heritage events, the daily practices of going down to the harbor and the material adornments underscore how fisheries still bring meaning to Hirtshals.

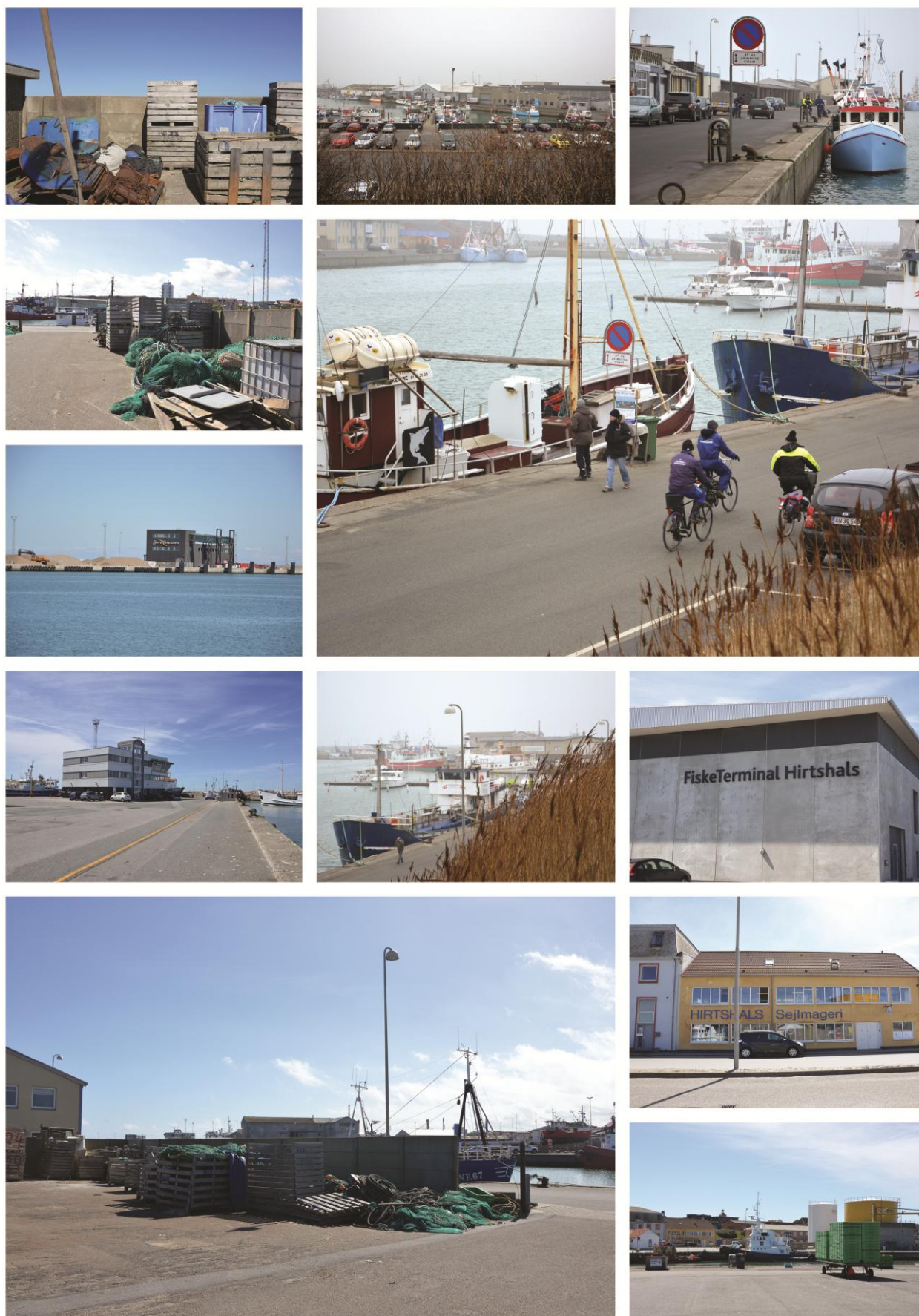


Figure 5. Different views and impressions from a 'harbor round'. (Photos by I.S.G. Lange).



Figure 6. Visual markers of fisheries cultural heritage are omnipresent. (Photos by I.S.G. Lange).



Figure 7. Many grave markings in the cemetery include maritime insignia. (Photos by I.S.G. Lange).

“Do not cry over a few fish”

While there were concerns about fishing activity diminishing, these were mostly couched in economic terms or related to maintaining support businesses. The ferries and the transport represented what Hirtshals had become, its present and its future, “I think Hirtshals as a town—because we have all the ferries and we have the harbor—it gives us a lot of possibilities. And it’s our job in Hirtshals to develop the jobs that the harbor gives us. Absolutely. So, do not cry over a few fish” (Jacob, local resident and banker). Other respondents confirmed that people in Hirtshals are generally adaptive and unsentimental, and unafraid of big changes. This is not to say that people in Hirtshals were not concerned for the viability of their community, but *which* activities were not as important as there *being* activity, “I think we have seen a lot of willingness [to adapt] [...] You are willing to be a part of the changes, also in your education. So, you take a new education, or you join some courses so you can work in another industry. There has been a great willingness to do that” (Janne, tourism development specialist, raised in Hirtshals).

First, there are interesting parallels in Janne’s point about needing to develop new skills oneself and Jacob’s remark, “...it’s our job in Hirtshals to develop the jobs that the harbor gives us”. Willingness to adapt and a less entrenched sentimentality combine to facilitate Hirtshals’ transition from fishing harbor to transport hub. Nonetheless, Janne points to a period in time when fishing was going down and there were negativity and uncertainty. Moreover, some recognized instances where age and lower educational attainment made individual adaptation more difficult discussing the impact of automation in fish processing, “I think a lot of them are trying to survive this change that is happening. had ...[Those processing fish] got a lot of money for that job because the industry earned a lot of money then” (Karl, fisheries and maritime consultant).

In this case, there is a recognition that for a segment of the local population, the height of fishing offered a better livelihood, “It’s not because people want to change; it’s because it is necessary” (Lars, Port of Hirtshals leadership). Lars recognizes that circumstances changed, which he continued and noted are related to the introduction of quotas and consolidation and concentration onto larger vessels, “So it’s development forced by the environment—the political environment” (Lars). These changing circumstances in the local economy, largely a result of national fisheries policy, propelled adaptation with varying degrees of success at the individual level, but with the ferries supplementing and supporting some of the ancillary industries. Hirtshals and its harbor reformulated and found new ways of operating that maintained the activity on the waterfront.

Hirtshals still grapples with the transformation of the harbor and the consolidation of its fleet. The mayor of Hjørring municipality noted that the greatest challenge facing the municipality is determining this converted role of the fishing industry, “Fisheries keeps on going. It is in another role, a completely different one. So, that is the transition we are in. That is the biggest of all the challenges for Hjørring municipality, this transition or readjustment. The transition from what it was to what it will be” (Arne, Mayor of Hjørring Municipality). When talking about change and the harbor in Hirtshals, many referred to the days when one could walk across the harbor and still “have dry shoes on”, as an indication of the greater extent of fishing activity (see Figure 8). Others talk about the “smell of money” that used to hang all over town because of the ubiquitous odor of the five fishmeal factories located in the port at the height of fishing.



Figure 8. Changes in Hirtshals: Once one could walk across the decks of fishing vessels lined up in the harbor (left). (© Historisk Arkiv Hjørring). Now, one could walk across the hoods of cars lined up for the ferry (right). (© Port of Hirtshals).

The transition from fish to transit

Industrial ports like Hirtshals appear insulated from changes in the operation of the fishing industry because of their greater alternatives. Nevertheless, Hirtshals also struggled and adapted in the wake of consolidation and concentration. With the level of fishing clearly diminished although with an uncertain future, Hirtshals has looked to new marine-based industries and has diversified. Ferries carry both passengers and cargo throughout the year and have supplemented the gap in demand for ancillary businesses that once served the fishing fleet almost exclusively (see Figure 8). Many respondents spoke of this transition, “Somehow, it is a sign that we have become a transit hub,...we are a transit hub of goods” (Jan, local resident, CFO in Frederikshavn).

Respondents noted changes in family life and social structure. In the past, traditional fishing family structure dominated the community, with fathers away at sea and mothers managing life ashore, but that pattern and embeddedness no longer persists as strongly. The local town council politician voiced frustration that many of jobs created at the harbor are not occupied by locals, nor do many workers choose to move to Hirtshals, preferring instead to commute, a sign of the shift from cityport to hub port, “There have never been so many workplaces and jobs, so that’s the good thing, but it means that people are commuting here, also because the jobs that are at the harbor today, they are somewhat different from those in the past, where many times they were almost exclusively unskilled” (Otto, local resident, City counselor and chair of tourist association).

Even though marine transportation is taking over as main industry in the port, fisheries are still important for the community in terms of jobs. As fishing activity reduces—the fleet consolidates and effort concentrates on fewer vessels—there is a risk that demand for ancillary services drops, making it harder to sustain themselves:

As soon as the fishery is gone, then the carpenters fall away and thus the ones that can service [our boats]. As soon as we do not have a tradesman, or an electrician for the ship’s electronics, or if you do not have a net mender, then one goes over to another port to find that trade. So, the next time you land and you have a trawler that is broken, you won’t sail to Hirtshals. [Instead] you will sail to where you can find someone to repair it. So, that is a big challenge to retain the service industries and that one can only be done by maintaining some fisheries (Hans, local resident, fisheries association member).

Thus, this symbiosis reveals the pattern of fisheries dependence in the community and the general direction toward diversification, which in most instances supplements the service industries.

Despite this tendency, some local businesses are adapting to the change; diversification has occurred at the firm level. Small businesses reliant on the fishing industry either changed their business models entirely or supplemented the industry's sagging demand with other applications.

The Port's marketing manager provided a number of examples of companies that have grown significantly over the past few years, including SupPort, which started as two men with a desire to build a business with about 25 employees. Today they have about 80 employees:

Though Mads lives in Hjørring, they are individuals who belong here. Tom himself is from Hirtshals originally. [...] All the people they hire are primarily natives of Northern Jutland [...]. So, they do a lot for the [community], and that's what they want. They want to keep it up here. ...So, they also really do a lot for employment, you could say (Line, Marketing Manager at Port of Hirtshals, resident in Hjørring).

The assertion of "belonging to Hirtshals" highlights how local identity is tied to assisting in economic development. Furthermore, the connection between the port and who are employed was emphasized by others interviewed.

Another business originating in Hirtshals with connections to the fishing industry is the company SeaStraight. The genesis of SeaStraight and its propeller shaft straightening technique began in the 1960s with a father-son team in Hirtshals:

"At that time, it was mostly done to the local fishing vessels when they had a bent shaft, the technique was developed, and it got more and more interesting also for the insurance companies outside Hirtshals. So, it expanded in the beginning to the rest of Denmark, and then to the Scandinavian countries, and now worldwide" (Commuter, communication manager at SeaStraight).

At first SeaStraight was dependent on the local fishing fleet, but then widened its market, building upon its localized and specialized workforce, but also recognizing the newly emerging potential of markets in Nordic countries and then global markets. SeaStraight pulled much of its specialized workforce over from its previous firm when it began operation in 2004, but has also recognized the specialization of many of its older workers and it has tried to retain that knowledge. The company also played a major role in repairing two oil platforms that came into Hirtshals in 2011 and 2012. Altogether, firms and small businesses have looked to fill the gap in demand from the fishing industry. SeaStraight represents one of the few cases where there was a full transformation and expansion in the type of customers over time.

Speaking on diversification, Hans, a representative of the fishing industry said:

The greatest opportunity we have now, that is the large ferry traffic and then, the fishing we have left. The monetary value put into the port today by the ferry companies, they help to maintain the good harbor we have today. Because if fishing were to pay for the maintenance of the port, it cannot be based on what is landed today. There is far too little fish and too little revenue for it to maintain the port in the state it should be in. So therefore, it is positive and the future will be that we will always have some ferries that will be there to maintain the port (Hans, local resident, fisheries association member).

Mette, a public official at Hjørring Municipality underlined the industrial nature of Hirtshals, "Because in Hirtshals, it is the port. It's the easy way to Norway and the ferries in the port. You know, 'the blue and the black' industry is important in Hirtshals and it has the community's priority". Two local bankers, who have spent their lives in Hirtshals and financed many fishing vessels observed that Hirtshals has changed a great deal over their lifetimes, namely in the

contraction of the fleet. Martin expanded, “The harbor is getting bigger, but it’s other activities than fishery. It’s transport, ferries, other vessels than fishing vessels for repair”. In addition to the ferries, the Port of Hirtshals also looked to secure “blue and black” industry jobs through the restoration and repair of offshore oil platforms. When asked whether there had been community resistance toward the oil platforms coming to the harbor, two informants noted on the contrary the excitement and interest that both local people and visitors had for the excitement and interest that both local people and visitors had for the oil platforms. The oil rigs further exemplify the diversification of Hirtshals and its transition from fishing to transport and maritime service.

Sticky or slippery? Or both at the same time?

Interviews with key informants working and living in Hirtshals tell of several initiatives in the port and investments in infrastructure. From the Port Authority’s perspective, land expansion is the key to strengthening the industry in Hirtshals further. Over recent years a new road has been built to the port, skirting around the center of town to separate ferry traffic flowing to the different terminals and thus eliminate traffic jams and ensure that commercial vehicles can quickly access the port facilities. Altogether the investments strengthen the harbor as a ‘sticky place’ for a variety of businesses, as well as tourist travelers choosing the ferries as easy transit. However, as a negative consequence such configurations enabling flows to the port may unintentionally turn the town into a ‘slippery place’ as traffic has been redirected *around* the town, an indication of the port changing from cityport to hub port.

The ferries supplement a great deal of the loss the service sector suffered from the consolidated fleet. Although from an industrial perspective the ferries are generally considered a gain, some locals are more skeptical towards their actual benefits. Esben (local resident, Chief engineer in Hjørring) considers whether the ferry terminal could just as well be placed elsewhere:

[...] Apart from the small flock of tourists, or should I say *ferry travelers*, passing by [my windows] and ending up at the butcher⁵, then the ferry port could well be somewhere else, because it does not contribute much. The biggest contribution they have made, it is probably that we have got the motorway all the way up here [...] that is also a significant factor for the town. But I don’t know if they contribute. I do not have the impression that there is a whole lot working on the ferries living here in the town (Esben).

The quotation expresses a split between, on the one hand, a Castellan view that the ‘space of flow’ is separated from the ‘space of place’, and that the ferry port could so far be situated somewhere else without much significance to the town. On the other hand, a relational understanding recognizes that the ferries are important for connecting the town to the highway. The thoughts of Esben reflects in the ideas of Castells that the space of flows is dominant towards the space of places, and that “The only chance of resistance for localities is to refuse landing rights for overwhelming flows—only to see that they land in the locale nearby, therefore inducing the bypassing and marginalization of rebellious communities” (Castells 1999, p. 296-297).

The quotation by Esben and that from Hans in the previous section highlight differences in impressions about the benefits of the ferries. In terms of revenue and demand for services in the port, the ferries are seen as a boon, but the constant flow with little “left behind” in Hirtshals or benefit to the town highlights this duality of sticky and slippery. A survey among the largest providers of accommodation in Hirtshals (in Lange 2016) indicates that the ferries have a positive impact on the number of overnight stays, but that it is primarily short visits and most often single nights. One of the hotel owners explained:

⁵ Norwegians often come to Denmark to shop as prices are much lower on meat and alcohol.

It has given a positive spillover effect that more shipping companies and ferries have been added. But Hirtshals is a ferry town and all tourism goes out of town. In fact, better and faster ferries and departures have had a negative impact on the hotel industry in Hirtshals, as people can travel further without having to spend an overnight stay. [...] We suffer from the fact that the Norwegians can drive to Aalborg and stay in a hotel there, shop and go to the theater, and drive back and take the ferry from Hirtshals, without having to spend an overnight stay in town. We have no guests staying for a whole week in Hirtshals. Some may take two nights, but otherwise we have most guests staying here for a single night (Hotel owner in Hirtshals).

The experience of this hotel owner highlight the question of whether the ferries shape Hirtshals into a sticky or slippery place, or whether Hirtshals embodies both with differing influences. Moreover, Ducruet (2007) helps us understand that exogenous influences may be strong in Hirtshals (intermediacy), but that it has lost its centrality over the years as intermediacy has risen.

Decline in non-port businesses

Even though port businesses have grown, there has been a significant decline in the non-port businesses along with the fishing industry. The interviewed residents not engaged in port activities are not experiencing the growth of the port in their everyday lives. On the contrary, what is visible to them are closing shops and schools, the decline in population and physical decline in the town. One resident reflected on the decades of decline in local institutions and amenities:

Try to think, if it should continue like this: if we just take the last 20 years, just when I was young, [...] in Emmersbæk [a residential quarter of Hirtshals] [...] there was a butcher shop and grocery store, and a bakery, so much has closed! (Esben).

Even though the professionals engaged in port development argue that Hirtshals should be considered a “business metropolis”, such perception does not hold among many Hirtshals residents. Residents see the commercial life of the town disappearing; they experience how the local population decrease takes effect:

I think that has a lot to do with jobs! There is no future for a young person here in the town, that is, when I was young and went to school, if I did not go to school, then I could just go down to the harbor and get a job, and then I could earn myself a really ‘fat wage’, and that was what many of my peers did: they went down and earned a pretty nice, fine annual salary at the harbor!—It is no longer possible (Jan, local resident and CFO in Frederikshavn).

Locals raised in Hirtshals point to how the port-city and its opportunities have changed over time. Moreover, residents find themselves commuting to other cities and towns for work, and sometimes at great distance because of limited opportunities on account of the construction of coastal peripheries. Common among the members of an interviewed family was that they each commuted to work in Hjørring, Frederikshavn, and Aalborg respectively. Evidence shows that there is both an understanding that the economic activities at the port are robust, whereas some young people have to consider how their educational choices may dictate whether they can live out their adult lives in Hirtshals (Hansen 2011, 2014).

The community’s penchant for quick decisions and action has also influenced its development. The lower degree of sentimentality is certainly palpable as one Hirtshals’ residents confirmed that people there are less intimidated by change, especially if there is new work to be found. A number of informants talked about the town being a place of action without a great deal of premeditation and discussion. One resident told that Hirtshals was sometimes referred to as a “*brugerby*”, which

best translates as “user [friendly] city”, and the informant explained how this moniker meant that town opted for function over aesthetics, which connected to its tendency to prefer action over deliberative planning. Contrasting Hirtshals’ Chamber of Commerce to others, the mayor noted, “In Hirtshals’ Chamber of Commerce, if they have discussed something on Friday, then they are carrying it out on Thursday the following week” (Arne, Mayor of Hjørring Municipality).

Although the two families in the group interview have deliberately chosen to live in Hirtshals, it is not the town’s urban and architectural expression that has won their hearts. To them, the town is ‘not pretty’, but ‘an underdog’ with ‘lawless urban planning’ compared to other coastal towns. One of the men explained the situation with a political desire for growth, progress and development, at the expense of aesthetics and architectural value:

But I just think it’s something about [...] that now somebody is doing something to maybe get things going. [...] So, there is no common sense from an architectural point of view, that you should be allowed to build such as they have done, but I just think... Yes, you are subject to that we are missing jobs, and now finally someone is doing something a little businesslike, and then the municipality should not come and [obstruct] (Esben).

A local city council politician described the striking mix of different building styles in Hirtshals as ‘authentic’. Some locals experience that the strong focus on business development suppresses the town’s aesthetic. In contrast to other port-cities where the trend of the past 30 years has been on redevelopment of urban waterfronts for housing and recreational purposes (e.g. Hoyle, Pinder & Husain 1988), the transition in Hirtshals towards transportation and industrial land expansion has suppressed that more common development of port-city beautification.

Hirtshals as a town for settlement – interdependence between port and town?

As aforementioned, the highway has made it easier to settle in one place and work in another. Line, being a daily commuter, explains:

Once it was the whole town that worked at the port, or was attached [to the port]. I don’t know how much it is today. Because I think there are also some who move down here again, or lives here [...], but they work in Hjørring, or Aalborg or Brønderslev (Line, Marketing Manager at Port of Hirtshals and resident in Hjørring).

The quotation expresses an understanding of the commercial port and the town as two independent ‘quantities’. For the ‘rooted’, the motorway allows you to live in Hirtshals and commute to the larger cities. But it also makes it easier to settle elsewhere and commute to work at the harbor. Among Line’s eighteen colleagues at the Port of Hirtshals, less than three live in downtown Hirtshals and less than three live on the fringe of town, eight live in Hjørring, and the rest in various Northern Jutland villages. She predicts, “And it will only be more. You can see our entire technical service, it has almost been replaced [due to age]. [...] Many of those who were here before, they lived down here [in Hirtshals], but all the new ones they commute from outside” (Line). These changed patterns of local residency and commuting are evidence that Hirtshals has changed from a *cityport* to a *hub port* in Ducruet terms.

Although the Port of Hirtshals is generally engaged in the town and among other things helps to organize events for the town and its tourists, the port’s marketing manager points out that the town is not essential for the port’s business:

In terms of settlement, our customers (i.e. goods and so on), they do not come here because of the town. For that, [the town] has no meaning. So, it would be mostly the service companies and someone like that who could have people... I also know that some of those who sail [the fishing boats] or own them, they don't necessarily live in Hirtshals, (Line).

In this way, port and town, at least from the port authority's perspective, are seen as two separate entities. This was further confirmed at a port seminar on "Local conversion—ports, companies and local development power"⁶ when the port director from Hirtshals presented his approach to 'the port as a nerve center'. He portrayed the port of Hirtshals as 'independent' from the town. Despite this, eventually he declared how the port could become challenged over time due to local population decline as their local knowhow often has been the cornerstones of new businesses establishing at the port. In the interview, the local city council politician also expressed the opinion that the town needs local citizens with jobs at the port.

Discussion & Conclusion

Over the past 90 years Hirtshals has changed, in Ducruet's terms, from being a *coastal town* towards a *hub port*. Specifically, we recognize several changes and historic periods in Hirtshals; Hirtshals began as a *coastal town* up until the 1930s when the port was officially inaugurated. From that point the place became more of an *outport* due to the fact that the town grew slowly population-wise in the first decades while trade and fish landings grew faster. In the late 1950s and especially the 1960s, the population increased rapidly and once again port and town seemed to be in balance, now in the shape of a *cityport*. Town and port kept growing simultaneously up until 1996 where the population peaked at 7,009 inhabitants. Since the 1996 peak, the town's population has decreased (5759 inhabitants in 2019), but the port has kept growing both in terms of area size, cargo, traffic, and turnover. This is the period in which we argue that Hirtshals has once again made a transition away from the "hierarchical combination of centrality and intermediacy" (Ducruet 2007, p. 160) into being a *hub port*. It is in this most recent transition that we have centered our analysis. Engaging with Ducruet's model we identify the various typologies that Hirtshals has occupied and have expanded the static nature of the model by considering movement. Markusen (1996) and Castells (1996) help us set the empirical discussions of the movement of goods and people into the context of a peripheralized place and its inhabitants.

The case of Hirtshals demonstrates that economic development and port business successes do not necessarily translate to local development or endogenous attraction. The interview material partially confirms that Hirtshals is less desirable for settlement as informants report that people move away, the school closes and that there is less town life. But, the interview material also shows that Hirtshals should not be understood as a non-place (Augé 1995), but as a place with a history and distinct culture. The harbor is a central part of the town's identity, and it is noteworthy how it is a strong "mobility object" that gives identity to the town. The 'space of flows' contain historical and relational "hinterlands", which are important for the functioning of the transit. But at the same time, it also has built-in contradictions that challenge the town of Hirtshals. Although the harbor is the cornerstone of the town's identity, it has over the past decades changed from a fishing port to transit port or what the port itself calls an 'intermodal logistics center'. This challenges the town in terms of its own understanding of self. People who maintained the fishing port lived in the town with their families, while the workers and knowledge workers who maintain the transit port are not equally motivated to settle here.

⁶ The seminar was hosted by The Port of Aalborg in 2015.

Castells reminds us that network connections are not only based on contemporary exchanges, but “cultural identity is often built on the basis of sharing historical experience in a given territory”, (Castells 1999, p. 296). Hirtshals’ historic participation in fisheries may represent its cultural identity, but with the lower rate of participation in this industry with strong occupational identity, will Hirtshals struggle connecting residents within its territory? Our research has looked at how locals have felt and coped with the challenges of this shift, revealing a struggle to find another ‘embedded’ industry. Hirtshals’ spirit of toughness and characterization as enterprising has meant that the community members have demonstrated a high degree of adaptability. A widespread lack of sentimentality was captured in the expression ‘do not cry over a few fish’ and one of looking forward for new potentials within the changed situation. It is also important to stress, that the change has come with costs.

The job market has changed faster than the community, making a gap between the local culture of many blue collar workers and now more specialized demands for engineers to work at the port, and also the decreasing number of positions in the public sector enhance commuting between Hirtshals and the larger cities in North Jutland. With a clear self-image of an active fisheries community, locals have been struggling to find what identifies the present community where much activity is transit based and less is about local skills. The case of Hirtshals gives insights on the intended balance between port and town and the implications for emphasizing port development independent of the local community. Mobilities cut both ways—they can bring people in and out of a place. Prioritizing unencumbered movement in the name of time (and by some consequences cost) local communities may face new challenges, requiring reinvention.

Port-city relations are not stable; they are repeatedly revisited and renegotiated. Such renegotiations should involve many different stakeholders (e.g. port authority, companies, unions, municipality, residents, business owners, tourist and cultural associations) in order to ensure a healthy and sustainable relationship between port and city in the long run. In terms of Hirtshals, I.S.G. Lange is currently leading a 4 year comparative study of seven Danish port-cities, including Hirtshals, addressing changes in their respective port-city relationships and configurations over time, as well as differences and similarities across the cases. Continuous conversations with stakeholders in Hirtshals and the attention the research has brought to some of the challenges facing this town has in fact initiated a municipality driven process of “Area Renewal in Hirtshals”. This process brings together stakeholders, such as those mentioned above, and multiple projects are already materializing between port and city that intend to bring new energy to the community.

The Ducruet model is an abstract matrix, and for future research we suggest more studies that ground truth the nine different categories of port-cities to understand their different characteristics, qualities, challenges and potentials. Looking further into cases of shifts between the categories in the matrix, we would suggest to include literature and studies from economic and social geography, as well as ethnographic and qualitative methods to understand the dynamics and lived implications of various corners and cross-sections of the typology. Furthermore, a research agenda that examines cases lower on the centrality dimension, will help the field break free of the dominance of the Global port city.

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